DATE:13/10/24

EXP 10B BUILDING A SIMPLE PING APPLICATION

Aim:

To develop a ping program to test server connectivity using socket.

Algorithm: Servers.py

1. Import the socket package
2. Initialize local IP address and local port
3. Create a socket
4. Bind the IP address and port number
5. Receive client message and send reply

Clients.py

1. Import the socket package
2. Initialize server IP address and port
3. Create a socket
4. Start the timer and send message
5. Receive reply and stop timer

Server Program: import socket def start_server(host='127.0.0.1', port=12345):

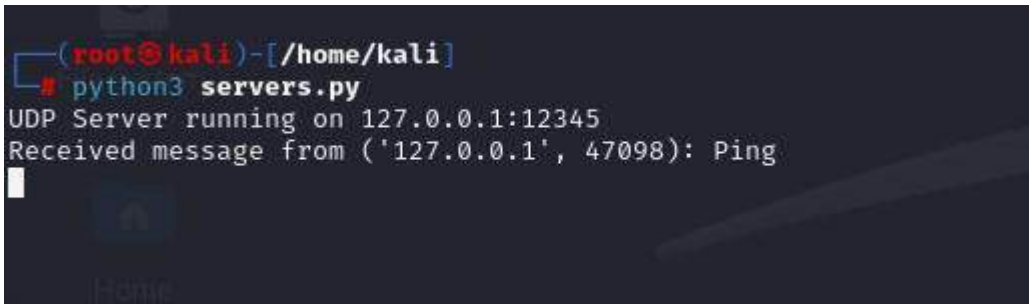
```
    with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
        s.bind((host, port))
        print(f"UDP Server running on {host}:{port}")

        while True:
            data, addr = s.recvfrom(1024)
```

```
        print(f"Received message from {addr}: {data.decode()}")
s.sendto(b'Pong', addr)

if __name__ == "__main__":
   start_server()
```

Output:



Client Program: import socket import time

```
def ping_server(host='127.0.0.1', port=12345):
   with socket.socket(socket.AF_INET, socket.SOCK_DGRAM) as s:
try:
        s.settimeout(2)
start = time.time()
        s.sendto(b'Ping', (host, port))
data, addr = s.recvfrom(1024)           end
= time.time()
        print(f"Received {data.decode()} from {addr} in {end - start:.2f} seconds")
except socket.timeout:
        print("Request timed out")

if __name__ == "__main__":
   ping_server()
```

Output:

Result:

Ping program to test server connectivity using socket is verified.